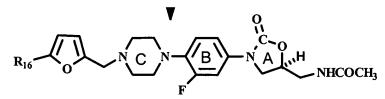


- 1. Cancelled.
- 2. Cancelled.
- Cancelled. 3.
- 4. Cancelled.
- Cancelled. 5.
- Cancelled. 6.
- Cancelled. 7.
- 8. Cancelled.
- Cancelled. 9.
- Cancelled. 10.
- 11. Cancelled.
- Cancelled. 11.
- Cancelled. 12.
- Cancelled. 13.
- Cancelled. 14.
- Cancelled. 15.
- (Original) A process for preparing a compound of Formula XI 16.



FORMULA XI

 $(R_{16} = -CH_2F \text{ or } -CH_2F_2)$ by reacting a compound of Formula IX

FORMULA IX

with sodium borohydride to produce a compound of Formula X

FORMULA X

and further reacting this compound with diethylamino sulfurtrifluoride to produce compound of Formula XI.

17. (Original) A process for preparing a compound of Formula XII

FORMULA XII

wherein $R_{17} = \sum_{N=0H}$ which comprises reacting (S)-N-[[3-Fluoro-4-[N-1[4-{2-furyl(5-formyl)methyl}]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl] acetamide of Formula IX

FORMULA IX

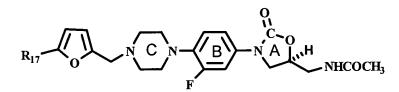
with hydroxylamine.

18. (Original) A process for preparing a compound of Formula XII

FORMULA XII

wherein $R_{17} = \sum_{N=NH_2} \text{which comprises reacting (S)-N-[[3-[3-Fluoro-4[N-1-[4-{2-furyl-(5-hydrazone)-methyl}]-piperazinyl]-phenyl]-2-oxo-5-oxazolidinyl]-methyl]acetamide with hydrazine hydrate.$

19. (Original) A process for preparing a compound of Formula XII



FORMULA XII

wherein $R_{17} = -C_{NH} - C_{NL}COOCH_3$ which comprises reacting (S)-N-[[3-[3-Fluoro-4-[N-1-[4-(2-furyl-(5-aldoxime)methyl]] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide with isocyanate.

20. (Original) A process for preparing a compound of Formula XII

FORMULA XII

wherein R_{17} = CN which comprises reacting (S)-N-[[3-[3-Fluoro-4-[N-1]4-{2-furyl(5-cyano)methyl}]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide with trifilic anhydride and triethylamine.

21. (Original) A process for preparing a compound of Formula XII

$$R_{17} = \begin{pmatrix} 0 & 0 & 0 \\ 0 & C & 0 \\ 0 & A & H \\ 0 & NHCOCH_3 \end{pmatrix}$$

FORMULA XII

wherein R17 = $-c_{0}^{10}$ which comprises reacting (S)-N-[[3-Fluoro-4-[N-1[5-(1,3-dioxane)-2-furylmethyl]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide with 1,3-propane diol and BF₃ etherate.

22. (Original) A process for the preparation of the compound of Formula XIV

FORMULA XIV

wherein $R_{18} = \frac{1}{C} NH_{18}$ which comprises reacting (S)-N-[[3-Fluoro-4-[N-1[4-{2-furyl(5-formyl)methyl}]] piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl] acetamide of Formula IX

FORMULA IX

with Ag₂O to produce (S)-N-[[3-Fluoro-4-[N-1[4-{2-furyl(5-carboxy)methyl}]-piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl] acetamide of Formula XIII followed by reacting (S)-N-[[3-Fluoro-4-[N-1[4-(2-furyl- (5-carboxyethyl)methyl)piperazinyl] phenyl]- 2-oxo-5-oxazolidinyl]methyl] acetamide of Formula XIII

FORMULA XIII

with aqueous ammonia to produce Formula XIV.

23. (Original) A process for the preparation of the compound of Formula XIV

$$R_{18} = 0$$

$$N = 0$$

FORMULA XIV

wherein
$$R_{18} = \frac{0}{C} N_{0}$$

which comprises reacting (S)-N-[[3-Fluoro-4-[N-1[4-{2-furyl(5-formyl)methyl}] piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl] acetamide of Formula IX

$$\begin{array}{c} H \\ \downarrow \\ O \end{array} \begin{array}{c} N \\ \downarrow \\ O \end{array} \begin{array}{c} N \\ \downarrow \\ B \end{array} \begin{array}{c} N \\ \downarrow \\ N \end{array} \begin{array}{c} N \\ N \end{array} \begin{array}{c} N \\ \downarrow \\ N \end{array} \begin{array}{c} N \\ \downarrow \\ N \end{array} \begin{array}{c} N \\ \downarrow \\ N \end{array} \begin{array}{c} N N \end{array} \begin{array}{c} N \end{array} \begin{array}{c} N \\ N \end{array} \begin{array}{c} N \end{array} \begin{array}{c} N \end{array} \begin{array}{c} N \\ N \end{array} \begin{array}{c} N \end{array} \begin{array}{c} N \end{array} \begin{array}{c} N \\ N \end{array} \begin{array}$$

FORMULA IX

with Ag₂O to produce (S)-N-[[3-Fluoro-4-[N-1[4-{2-furyl(5-carboxy)methyl}]-piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl] acetamide of Formula XIII followed by reacting (S)-N-[[3-Fluoro-4-[N-1[4-(2-furyl- (5-carboxyethyl)methyl)piperazinyl] phenyl]- 2-oxo-5-oxazolidinyl]methyl] acetamide of Formula XIII

FORMULA XIII

with thionyl chloride to produce Formula XIV.

24. (Original) A process for the preparation of the compound of Formula XIV

FORMULA XIV

wherein
$$R_{18} = \bigcup_{C}^{O} N$$

which comprises reacting (S)-N-[[3-Fluoro-4-[N-1[4-{2-furyl(5-formyl)methyl}] piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl] acetamide of Formula IX

FORMULA IX

with Ag₂O to produce (S)-N-[[3-Fluoro-4-[N-1[4-{2-furyl(5-carboxy)methyl}]-piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl] acetamide of Formula XIII followed by reacting (S)-N-[[3-Fluoro-4-[N-1[4-(2-furyl- (5-carboxyethyl)methyl)piperazinyl] phenyl]- 2-oxo-5-oxazolidinyl]methyl] acetamide of Formula XIII

FORMULA XIII

with morpholine in the presence of oxalyl chloride to produce Formula XIV.

25. (New) A compound having the structure of Formula I

$$R - T - W - X C N - B N A O$$

$$Z$$

$$C N - B N A O$$

$$R - C N - C N A O$$

FORMULA I

and its pharmaceutically acceptable salts, enantiomers, diastereomers, or N-oxides, wherein

T is five- to seven-membered heterocyclic ring, aryl, substituted aryl, bound to the ring C with a linker W and the heterocyclic and aryl rings are further substituted by a group represented by R,

wherein R is selected from the group consisting of alkyl (C_{1-6}), halogen–CN, COR_5 , $COOR_5$, $N(R_6,R_7)$, CON (R_6 , R_7), CH_2NO_2 , NO_2 , CH_2R_8 , CHR_9 , $-CH = N-OR_{10}$, $-C=CH-R_5$, wherein R_5 is selected from the group consisting of H, optionally substituted C_1 - C_{12} , alkyl, C_{3-12} , cycloalkyl, aryl, heteroaryl; R_6 and R_7 are independently selected from the group consisting of H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy; R_8 and R_9 are independently selected from the group consisting of H, C_{1-6} alkyl, C_{1-12} alkyl substituted with one or more of F, Cl, Cl,

alkoxy, C_{1-6} alkyl substituted with one or more F, Cl, Br, I or OH and R_6 and R_7 are the same as defined earlier, R_{10} is selected from the group consisting of H, optionally substituted from H, optionally substituted C_{1-12} alkyl, C_{3-512} cycloalkyl, C_{1-6} , alkoxy, C_{1-6} alkyl, aryl, heteroaryl;

n is 1;

X is N

Y and Z are independently selected from the group consisting of hydrogen, C_{1-6} alkyl, and C_{3-12} cycloalkyl;

U and V are independently selected from the group consisting of hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, and C_{1-12} alkyl substituted with one or more of F, Cl, Br, I;

W is selected from the group CH_2 , CO, CH_2NH , $-NHCH_2$, $-CH_2NHCH_2$, $-CH_2-N$ (R_{11}) CH_2 -, -CO-CO-, CH_2 (R_{11}) N-, CH (R_{11}), S, CH_2 (CO), N (R_{11}) wherein R_{11} is hydrogen, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, aryl or heteroaryl;

 R_1 is selected from the group consisting of - NHC(=O) R_2 wherein R_2 is hydrogen, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl substituted with one or more of F, Cl, Br, I or OH; N(R_3 , R_4); -NR₂C(=S) R_3 ; -NR₂C(=S)SR₃ wherein R_2 is the same as defined above and R_3 and R_4 are independently selected from the group consisting of H, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl substituted with one or more of F, Cl, Br, I or OH.

26. (New) A compound having structure of Formula II

FORMULA II

and its pharmaceutically acceptable salts, enantiomers, diastereomers, or N-oxides, wherein M= O, S, NH, N-CH₃;

X is N;

Y and Z are independently selected from the group consisting of hydrogen, C_{1-6} alkyl, and C_{3-12} cycloalkyl;

U and V are independently selected from the group consisting of hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, and C_{1-12} alkyl substituted with one or more of F, Cl, Br, I;

W is selected from the group consisting of CH₂, CO, CH₂NH, -NHCH₂, -CH₂NHCH₂, -CH₂-N (R₁₁) CH₂ - , CH₂ (R11) N -, CH (R₁₁) , S, CH₂(CO), NH wherein R₁₁ is optionally substituted with C $_{1-12}$ alkyl, C $_{3-12}$ cycloalkyl, C $_{1-6}$ alkoxy, C $_{1-6}$ alkyl , aryl , heteroaryl except when M=S, Q=P=H, W=(C=O);

n is 1; and,

Q and P are independently selected from the group consisting of -CN, COR_5 , $COOR_5$, N (R_6 , R_7), CON (R_6 , R_7), CH₂NO₂, NO₂, CH₂R₈, CHR₉, -CH=N-OR₁₀, C=CH-R₅, wherein R₅ is selected from the group consisting of H, optionally substituted C₁₋₁₂alkyl, C₃₋₁₂ cycloalkyl, aryl, heteroaryl; R₆ and R₇ are independently selected from the group consisting of H, optionally substituted C₁₋₁₂ alkyl, C₃₋₁₂ cycloalkyl, C₁₋₆ alkoxy; R₈ and R₉

are independently selected from the group consisting of H, C_{1-6} alkyl ,F, Cl, Br, C_{1-12} alkyl substituted with one or more of F, Cl, Br, I, OR₄, SR₄, wherein R₄ is selected from the group consisting of H, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl substituted with one or more F, Cl, Br, I or OH, N(R₆, R₇), R₁₀ is selected from the group consisting of H, optionally substituted C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, aryl, heteroaryl except W= (CO), Q and P =H and M=S, wherein M = Sulphur and Oxygen as shown by Formulae III and IV respectively,

FORMULA III

wherein P, Q, U, V, X, Y, Z, W and n in Formulae III and IV as defined earlier for Formula I.

- 27. (New) A compound selected from the group consisting of
 - 1. (S)-N-[[3-[3-Fluoro-4-[N-1-[4-(2-furoyl) piperazinyl]]phenyl]-2-oxo-5-oxazolidinyl] methyl]acetamide
 - 2. (S)-N-[[3-[3-Fluoro-4-[N-1[4-{2-furyl(5-formyl)methyl}]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide

- 3. (S)-N-[[3-Fluoro-4-[N-1[4-(2-furyl-(5-carboxyethyl)methyl)piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide
- 4. (S)-N-[[3-Fluoro-4-[N-1[4-(5-bromo-2-furoyl)]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl] methyl]acetamide
- 5. (S)-N-[[3-Fluoro-4-[N-1[4-(5-chloromethyl-2-furoyl)piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide
- 6. (S)-N-[[3-Fluoro-4-[N-1[4-(5-nitro-2-furoyl)piperazinyl]phenyl]-2-oxo-5-oxazolidinyl] methyl]acetamide
- 7. (S)-N[[3-[3-Fluoro-4-[N-1[4-{2-(2-thienyl)dicarbonyl}]piperazinyl]phenyl]2-oxo-5-oxazolidinyl]methyl]acetamide
- 8. (S)-N[[3-[3-Fluoro-4-[N-1[4-(3-furoyl)]piperazinyl]phenyl]2-oxo-5-oxazolidinyl]methyl] acetamide
- 9. (S)-N[[3-[3-Fluoro-4-[N-1[4-{2-furyl(5-bromo)methyl}]piperazinyl]phenyl]2-oxo-5-oxazolidinyl]methyl]acetamide
- 10. (S)-N[[3-[3-Fluoro-4-[N-1[4-{2-thienyl(5-chloro)methyl}]piperazinyl]phenyl]2-oxo-5-oxazolidinyl]methyl]acetamide
- 11. (S)-N[[3-[3-Fluoro-4-[N-1[4-(2-furylmethyl)]piperazinyl]phenyl]2-oxo-5-oxazolidinyl] methyl]acetamide
- 12. (S)-N-[[3-[3-Fluoro-4-[N-1[4-(2-thienylmethyl)]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide
- 13. (S)-N[[3-[3-Fluoro-4-[N-1[4-(2-thienylacetyl)]piperazinyl]phenyl]2-oxo-5-oxazolidinyl] methyl]acetamide
- 14. (S)-N-[[3-[3-Fluoro-4-[N-1[4-{2-thienyl(4-bromo)methyl}]piperazinyl] phenyl]-2 oxo-5-oxazolidinyl]methyl]acetamide
- 15. (S)-N-[[3-[3-fluoro-4-[N-1-[4-{2-furyl-(5-nitro)methyl}]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide.
- 16. Hydrochloric salt of (S)-N-[[3-Fluoro-4-[N-1[4-{2-furyl(5-nitro)methyl}]piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide
- 17. Citrate salt of (S)-N-[[3-Fluoro-4-[N-1[4-{2-furyl(5-nitro)methyl}]piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide
- 18. (S)-N[[3-[3-Fluoro-4-[N-1[4-(2-pyrrolylmethyl)]piperazinyl]phenyl]2-oxo-5-oxazolidinyl]methyl]acetamide

- 19. (S)-N[[3-[3-Fluoro-4-[N-1[4-{2-thienyl(3-methyl)methyl}]piperazinyl]phenyl]2-oxo-5-oxazolidinyl]methyl]acetamide
- 20. (S)-N[[3-[3-Fluoro-4-[N-1[4-(3-furylmethyl)]piperazinyl]phenyl]2-oxo-5-oxazolidinyl] methyl]acetamide
- 21. (S)-N[[3-[3-Fluoro-4-[N-1[4-{2-thienyl(5-methyl)methyl}]piperazinyl]phenyl]2-oxo-5-oxazolidinyl]methyl]acetamide
- 22. (S)-N[[3-[3-Fluoro-4-[N-1[4-{2-pyrrole(1-methyl)methyl}]piperazinyl] phenyl]2-oxo-5-oxazolidinyl]methyl]acetamide
- 23. (S)-N[[3-[3-Fluoro-4-[N-1[4-{2-thienyl(5-nitro)methyl}]piperazinyl]phenyl]2-oxo-5-oxazolidinyl]methyl]acetamide
- 24. (S)-N[[3-[3-Fluoro-4-[N-1[4-[2-furyl{5-(N-thiomorpholinyl)methyl]methyl]piperazinyl] phenyl]2-oxo-5-oxazolidinyl]methyl]acetamide
- 25. (S)-N[[3-[3-Fluoro-4-[N-1[4-[2-furyl{5-(N-morpholinyl)methyl}]methyl]piperazinyl] phenyl]2-oxo-5-oxazolidinyl]methyl]acetamide
- 26. (S)-N-[[3-Fluoro-4-[N-1[4-{2-furyl(5-acetoxymethyl)methyl}]piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide
- 27. (S)-N-[[3-Fluoro-4-[N-1[4-{2-thienyl(5-bromo)methyl}]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide
- 28. (S)-N-[[3-Fluoro-4-[N-1[4-(5-nitro-2-furylmethyl)piperazinyl] phenyl]- 2-oxo oxazolidinyl]methyl]dichloroacetamide
- 29. (S)-N[[3-[3-Fluoro-4-[N-1[4-(5-nitro-2-thienoyl)]piperazinyl]phenyl]2-oxo-5-oxazolidinyl]methyl]acetamide hydrochloride
- 30. (S)-N[[3-[3-Fluoro-4-[N-1[4-(2',2'-diphenyl-2' hydroxy acetyl)] piperazinyl]phenyl]2-oxo-5-oxazolidinyl]methyl]acetamide
- 59. (S)-N-[[3-[3-fluoro-4-[N-1 {2-furyl-[4-(5-difluoromethyl) methyl] piperazinyl]-2-oxo-5-oxazolidinyl]-methyl]acetamide.
- 60. (S)-N-[[3-[3-Fluoro-4-[N-1-[4-(2-furyl-(5-aldoxime)methyl]] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide
- 61. (S)-N-[[3-[3-Fluoro-4-[N-1[4-{2-furyl(5-aldoxime(methyl-4-(N-carboxyaminophenyl acetate) methyl}]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide

- 62. (S)-N-[[3-[3-Fluoro-4[N-1-[4-{2-furyl-(5-hydrazone)-methyl}]-piperazinyl]-phenyl]-2-oxo-5-oxazolidinyl]-methyl]acetamide
- 63. (S)-N-[[3-[3-fluoro-4-[N-1 {2-furyl-[4-(5-difluoromethyl) methyl}]piperazinyl]-2-oxo-5-oxazolidinyl]-methyl]acetamide
- 64. (S)-N-[[3-[3-Fluoro-4-[N-1-[4-(2-furyl-(5-aldoxime)methyl]] piperazinyl] phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide
- 65. (S)-N-[[3-[3-Fluoro-4-[N-1[4-{2-furyl(5-aldoxime(methyl-4-(N-carboxyaminophenyl acetate) methyl}]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide
- 66. (S)-N-[[3-[3-Fluoro-4[N-1-[4-{2-furyl-(5-hydrazone)-methyl}]-piperazinyl]-phenyl]-2-oxo-5-oxazolidinyl]-methyl]acetamide
- 67. (S)-N-[[3-[3-Fluoro-4-[N-1 {2-furyl-[4-(5-hydroxymethyl)methyl}] piperazinyl]-2-oxo-5-oxazolidinyl]methyl]acetamide
- 68. (S)-N-[[3-[3-Fluoro-4-[N-1[4-{2-furyl(5-cyano)methyl}] piperazinyl]phenyl] -2-oxo-5-oxazolidinyl]methyl]acetamide
- 69. (S)-N-[[3-Fluoro-4-[N-1[4-{2-furyl(5-carboxy)methyl}]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl] acetamide
- 70. (S)-N-[[3-Fluoro-4-[N-1[5-(1,3-dioxane)-2-furylmethyl]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl] acetamide
- 71. (S)-N-[[3-Fluoro-4-[N-1[5-(formamido)-2-furylmethyl]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl] acetamide
- 72. (S)-N-[[3-Fluoro-4-[N-1[5-(morpholine-1-carbonyl)-2-furylmethyl]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl] acetamide
- 73. (S)-N-[[3-Fluoro-4-[N-1[5-(4-(tert butoxy carbonyl)amino piperidine)-2-furylmethyl]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl] acetamide
- 74. (S)-N-[[3-Fluoro-4-[N-1[4-{(Z)-2-methoxyimino-2-(2-furyl)acetyl}]piperazinyl]phenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide
- 28. (New) A pharmaceutical composition comprising the compound of claims 25, 26, or 27 and a pharmaceutically acceptable carrier.
- 29. (New) A pharmaceutical composition comprising a pharmaceutically effective amount of compound according to claims 25, 26 or 27, or a physiologically acceptable acid addition salt thereof with a pharmaceutically acceptable carrier for treating microbial infections.

- 30. (New) A method of treating or preventing microbial infections in a mammal comprising administering to the said mammal, the pharmaceutical composition according to claim 29.
- 31. (New) A process for preparing a compound of Formula I

$$R - T - W - X C N - B - N A O$$

$$Z C N -$$

FORMULA I

and its pharmaceutically acceptable salts, enantiomers, diastereomers, or N-oxides, wherein

T is five to seven membered heterocyclic ring, aryl, substituted aryl, bound to the ring C with a linker w and the heterocyclic and aryl rings are further substituted by a group represented by R,

wherein R is selected from the group consisting of -CN, COR_5 , $COOR_5$, $N(R_6,R_7)$, $CON(R_6,R_7)$, CH_2NO_2 , NO_2 , CH_2R_8 , CHR_9 , $-CH = N-OR_{10}$, $-C=CH-R_5$, wherein R_5 is selected from the group consisting of H, optionally substituted C_1-C_{12} , alkyl, $C_{3^{-1}2}$, cycloalkyl, aryl, heteroaryl, R_6 and R_7 , are independently selected from the group consisting of H, optionally substituted $C_{1^{-1}2}$ alkyl, $C_{3^{-1}2}$ cycloalkyl, $C_{1^{-6}}$ alkoxy; R_8 and R_9 are independently selected from the group consisting of H, C_{1-6} alkyl, F, Cl, Br, $C_{1^{-1}2}$ alkyl substituted with one or more of F, Cl, Br, I, OR_4 , SR_4 , $N(R_6,R_7)$ wherein R_4 is selected from the group consisting of H, $C_{1^{-1}2}$ alkyl, $C_{3^{-1}2}$ cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl substituted with one or more F, Cl, Br, I or OH and R_6 and R_7 are the same as defined earlier, R_{10} is selected from the group consisting of H, optionally substituted from H, optionally substituted $C_{1^{-1}2}$ alkyl, $C_{3^{-5}12}$ cycloalkyl, C_{1-6} , alkoxy, C_{1-6} alkyl, aryl, heteroaryl;

n is 1;

X is N;

Y and Z are independently selected from the group consisting of hydrogen, C_{1-6} alkyl, and C_{3-12} cycloalkyl;

U and V are independently selected from the group consisting of hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, and C_{1-12} alkyl substituted with one or more of F, Cl, Br, I;

W is selected from the group consisting of CH_2 , CO, CH_2NH , $-NHCH_2$, $-CH_2NHCH_2$, $-CH_2-N$ (R_{11}) CH_2 -, CH_2 (R_{11}) N-, CH (R_{11}), S, CH_2 (CO), NH wherein R_{11} is optionally substituted with C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, aryl, heteroaryl; and

 R_1 is selected from the group consisting of - NHC(=O) R_2 wherein R_2 is hydrogen, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl substituted with one or more of F, Cl, Br, I or OH; N(R_3 , R_4); -NR₂C(=S) R_3 : -NR₂C(=S)SR3 wherein R_2 is the same as defined above and R_3 and R_4 are independently selected from the group consisting of H, C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl substituted with one or more of F, Cl, Br, I or OH,

which comprises reacting an amine compound of Formula V

FORMULA V

with a heterocyclic compound of Formula R-T-W-R₁₂ wherein G in amines of

Formula V is defined as NH and Y, Z, U, V, R₁, n, R, T and W are the same as defined earlier and R₁₂ is a leaving group selected from the group consisting of fluoro, chloro, bromo, SCH₃, -SO₂CH₃, -SO₂CF₃ or OC₆H₅.

- 32. (New) A process for preparing a compound of Formula I as claimed in claim 31, wherein W=CH₂ and R-T-W-R₁₂ is a five membered heterocyclic ring with aldehyde group and the compound of Formula I is produced by reductive amination.
- 33. (New) A process for preparing a compound of Formula I as claimed in claim 31, wherein W = CO and R-T-W- R_{12} is a five membered heterocyclic ring with carboxylic acid, and amino compound of Formula V is acylated with activated esters in presence of condensing agents comprising 1,3-dicyclohexylcarbodiimide (DCC) and 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide (EDC).
- 34. (New) A process for the preparation of compound of Formula II

FORMULA II

wherein

n is 1;

X is N;

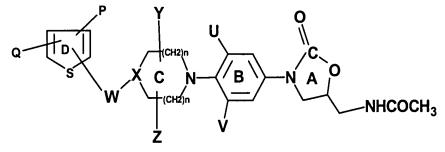
Y and Z are independently selected from the group consisting of hydrogen, C_{1-6} alkyl, and C_{3-12} cycloalkyl;

U and V are independently selected from the group consisting of hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, and C_{1-12} alkyl substituted with one or more of F, Cl, Br, I;

W is selected from the group consisting of CH_2 , CO, CH_2NH , $-NHCH_2$, $-CH_2NHCH_2$, $-CH_2-N$ (R_{11}) CH_2- , CH_2 (R_{11}) N-, CH (R_{11}), S, CH_2 (CO), NH wherein R_{11} is optionally substituted with C_{1-12} alkyl, C_{3-12} cycloalkyl, C_{1-6} alkoxy, C_{1-6} alkyl, aryl, heteroaryl; and

Q and P are independently selected from the group consisting of -CN, COR₅, COOR₅, N (R_6 , R_7), CON (R_6 , R_7), CH₂NO₂, NO₂, CH₂R₈, CHR₉, -CH=N-OR₁₀, C=CH-R₅, wherein R₅ is selected from the group consisting of H, optionally substituted C₁₋₁₂alkyl, C₃₋₁₂ cycloalkyl, aryl, heteroaryl; R₆ and R₇ are independently selected from the group consisting of H, optionally substituted C₁₋₁₂ alkyl, C₃₋₁₂ cycloalkyl, C₁₋₆ alkoxy; R₈ and R₉ are independently selected from the group consisting of H, C₁₋₆ alkyl,F, Cl, Br, C₁₋₁₂ alkyl substituted with one or more of F, Cl, Br, I, OR₄, SR₄,wherein R₄ is the same as defined before, N(R₆, R₇), R₁₀ is selected from the group consisting of H, optionally substituted C₁₋₁₂ alkyl, C₃₋₁₂ cycloalkyl, C₁₋₆ alkoxy, C₁₋₆ alkyl, aryl, heteroaryl except W= (CO), Q and P =H.

wherein M = Sulphur is shown by compounds of Formula III,



FORMULA III

wherein P, Q, U, V, X, Y, Z, W and n in Formula III are the same as previously defined, wherein the process comprising reacting a compound of Formula V

$$Z \xrightarrow{(CH_2)n} V \xrightarrow$$

FORMULA V

with a compound of Formula VI

wherein P, Q, R₁₂, Y, Z, G, n, U and V are the same as defined earlier.

- 35. (New) A process for preparing a compound of Formula II as claimed in claim 34, in a solvent selected from the group consisting of dimethylformamide, dimethylacetamide, ethanol or ethylene glycol at a temperature in the range of -70°C to 180°C in the presence of a base selected from the group consisting of triethyl amine, diisopropyl amine, potassium carbonate and sodium bicarbonate.
- 36. (New) A process of preparing a compound of Formula II as claimed in claim 34, wherein Formula VI is furaldehyde and reductive alkylation of the amine of Formula V is performed with a reducing agent.
- 37. (New) A process for preparing a compound of Formula II as claimed in claim 34, wherein Formula VI is furoic acid.

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- 38. (New) A process for preparing a compound of Formula II as claimed in claim 34, wherein the compounds of Formula II having carbonyl link are prepared by reacting a heteroaromatic compound of the Formula VI including N- methyl pyrrole with the intermediate amine of Formula V in the presence of triphosgene or phosgene and carbonyl linkers are introduced between heteroaromatic compound comprising reacting 3- bromothiophene and amine of Formula V with carbon monoxide and the catalyst is selected from the group consisting of Pd (PPh₃)₂Cl₂ and extended chain pyrroles having dicarbonyl linkers are obtained by treatment of oxalyl chloride and amine of the Formula V.
- 39. (New) A process for preparing a compound of Formula VIII

FORMULA VIII

wherein

n is 1;

X is N;

Y and Z are independently selected from the group consisting of hydrogen, C_{1-6} alkyl, and C_{3-12} cycloalkyl;

U and V are independently selected from the group consisting of hydrogen, optionally substituted C_{1-6} alkyl, F, Cl, Br, and C_{1-12} alkyl substituted with one or more of F, Cl, Br, I;

W is selected from the group consisting of CH_2 , CO, CH_2NH , $-NHCH_2$, $-CH_2NHCH_2$, $-CH_2-N$ (R_{11}) CH_2 -, CH_2 (R_{11}) N-, CH (R_{11}), S, CH_2 (CO), NH wherein R_{11} is

optionally substituted with C $_{1-12}$ alkyl, C $_{3-12}$ cycloalkyl, C $_{1-6}$ alkoxy, C $_{1-6}$ alkyl, aryl, heteroaryl;

Q and P are independently selected from the group consisting of -CN, COR₅, COOR₅, N (R_6 , R_7), CON (R_6 , R_7), CH₂NO₂, NO₂, CH₂R₈, CHR₉, -CH=N-OR₁₀, C=CH-R₅, wherein R₅ is selected from the group consisting of H, optionally substituted C₁₋₁₂alkyl, C₃₋₁₂ cycloalkyl, aryl, heteroaryl; R₆ and R₇ are independently selected from the group consisting of H, optionally substituted C₁₋₁₂ alkyl, C₃₋₁₂ cycloalkyl, C₁₋₆ alkoxy; R₈ and R₉ are independently selected from the group consisting of H, C₁₋₆ alkyl,F, Cl, Br, C₁₋₁₂ alkyl substituted with one or more of F, Cl, Br, I, OR₄, SR₄,wherein R₄ is the same as defined before, N(R₆, R₇), R₁₀ is selected from the group consisting of H, optionally substituted C₁₋₁₂ alkyl, C₃₋₁₂ cycloalkyl, C₁₋₆ alkoxy, C₁₋₆ alkyl, aryl, heteroaryl except W= (CO), Q and P =H;

M = Sulphur is shown by compounds of Formula III

FORMULA III

and R_{15} is the same as Q defined earlier, comprising converting a compound of Formula VII

FORMULA VII

wherein in U, V, Y, Z, X, W, P, n and M are the same as defined earlier and are R_{14} is any group which can be converted to group R_{15} in one to five steps.

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Applicants have now complied with 37 CFR 1.121 and included the status indicators for each claim. Authorization is hereby given to charge any fees deemed to be due in connection herewith to Deposit Account No. 50-0912.

Respectfully submitted,

MEHTA et al.

By:

orge E. Heibe

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